Figure 1

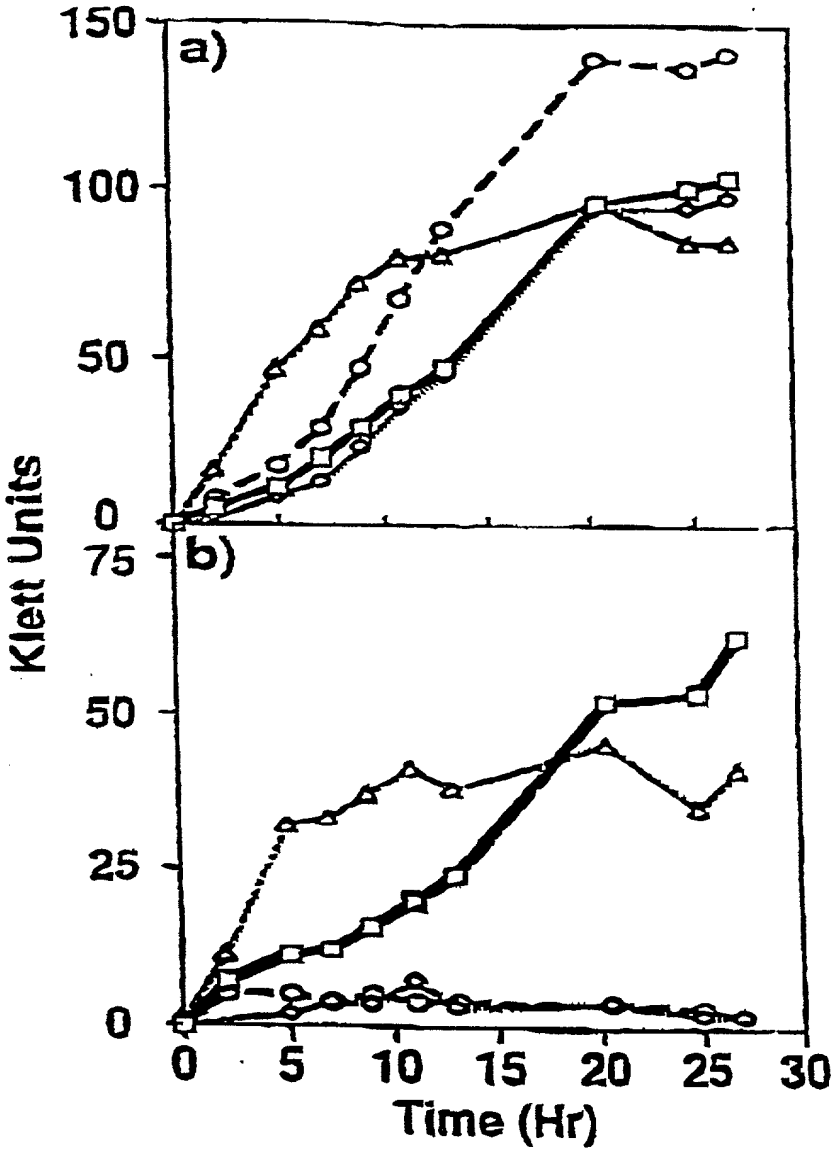


Figure 2

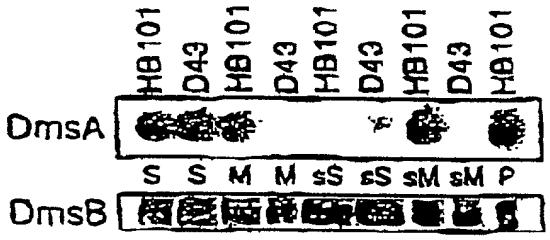

HB101
D43
HB101
D43
HB101
D43
HB101
D43
HB101
DmsA
S S M M sS sS sM sM P
DmsB

Figure 3

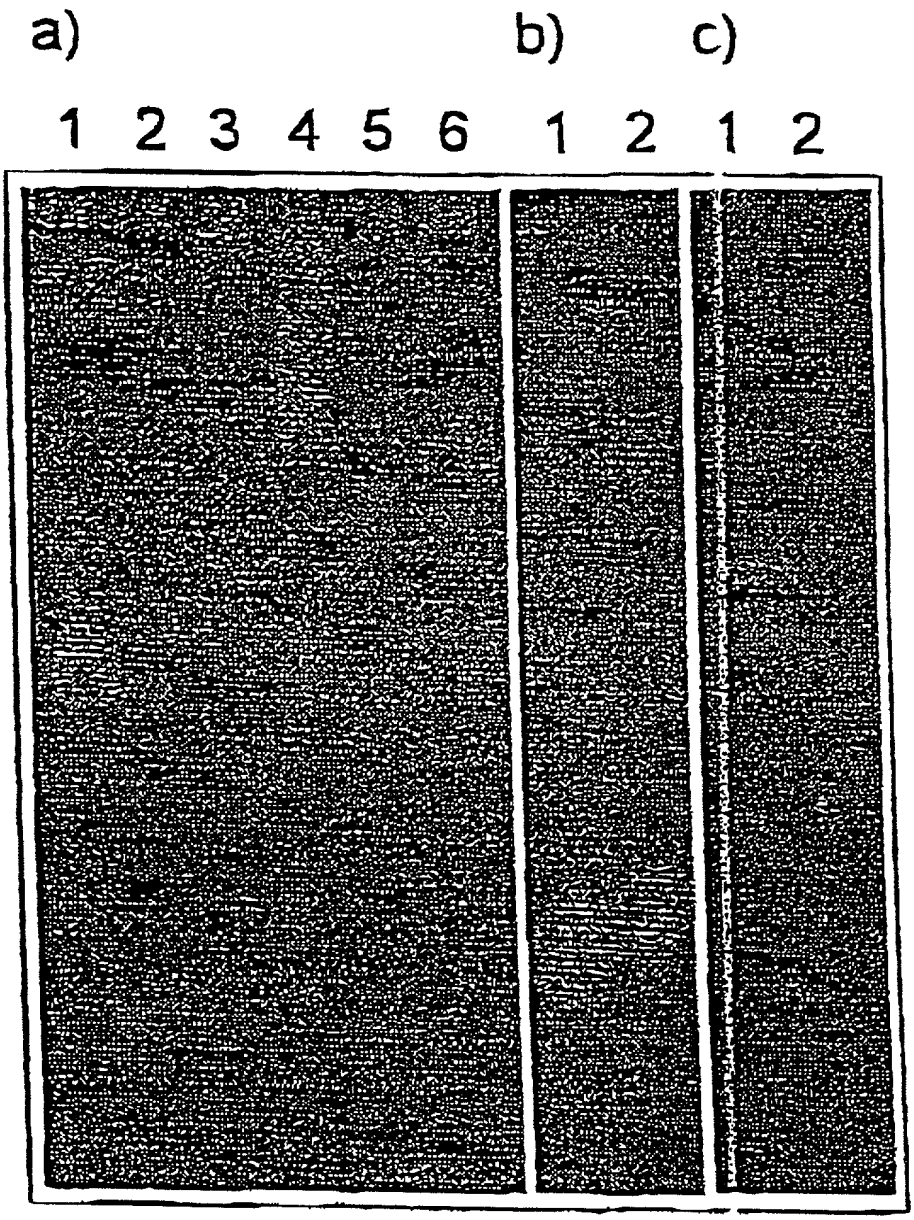
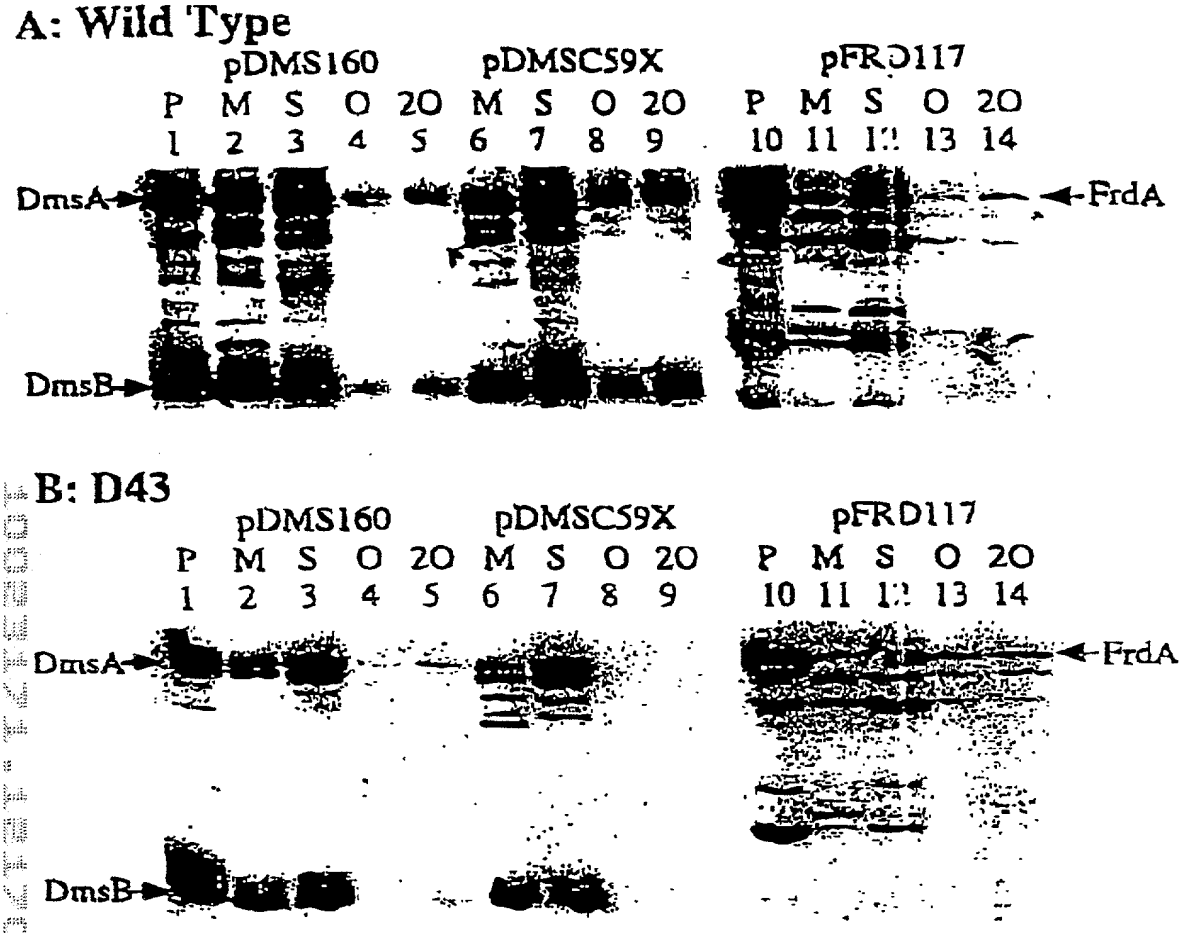


Figure 4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pDMSCS9X
pFRD117
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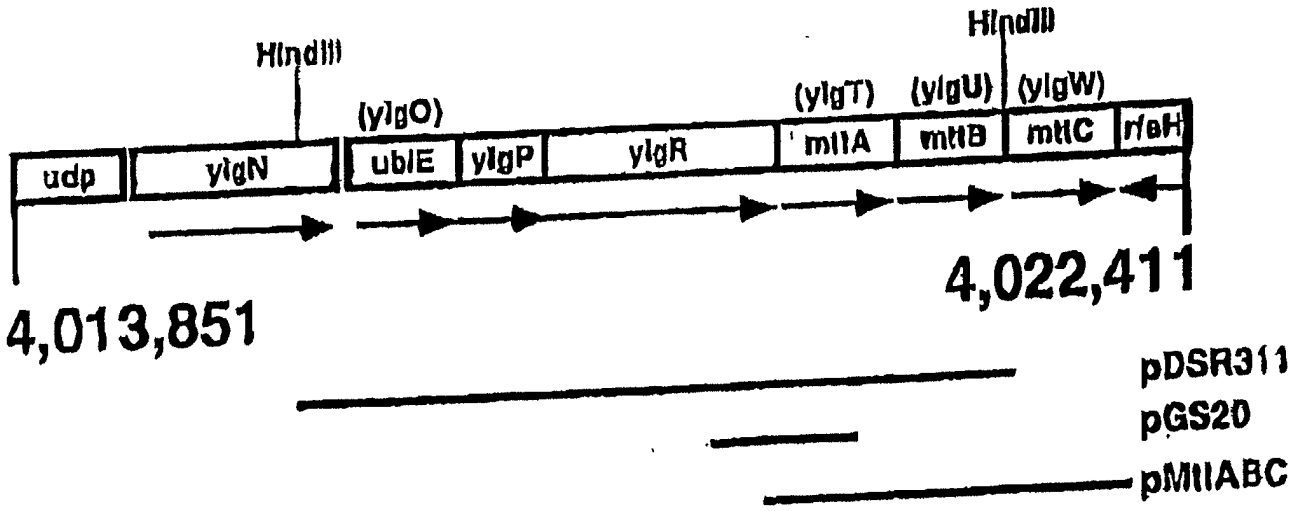
DmsA
DmsB
FrdA
B: D43
pDMS160
pDMSCS9X
pFRD117
P M S O 20 M S O 20 P M S O 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14
DmsA
DmsB
FrdA

Figure 5



10023171.121701

Figure 6

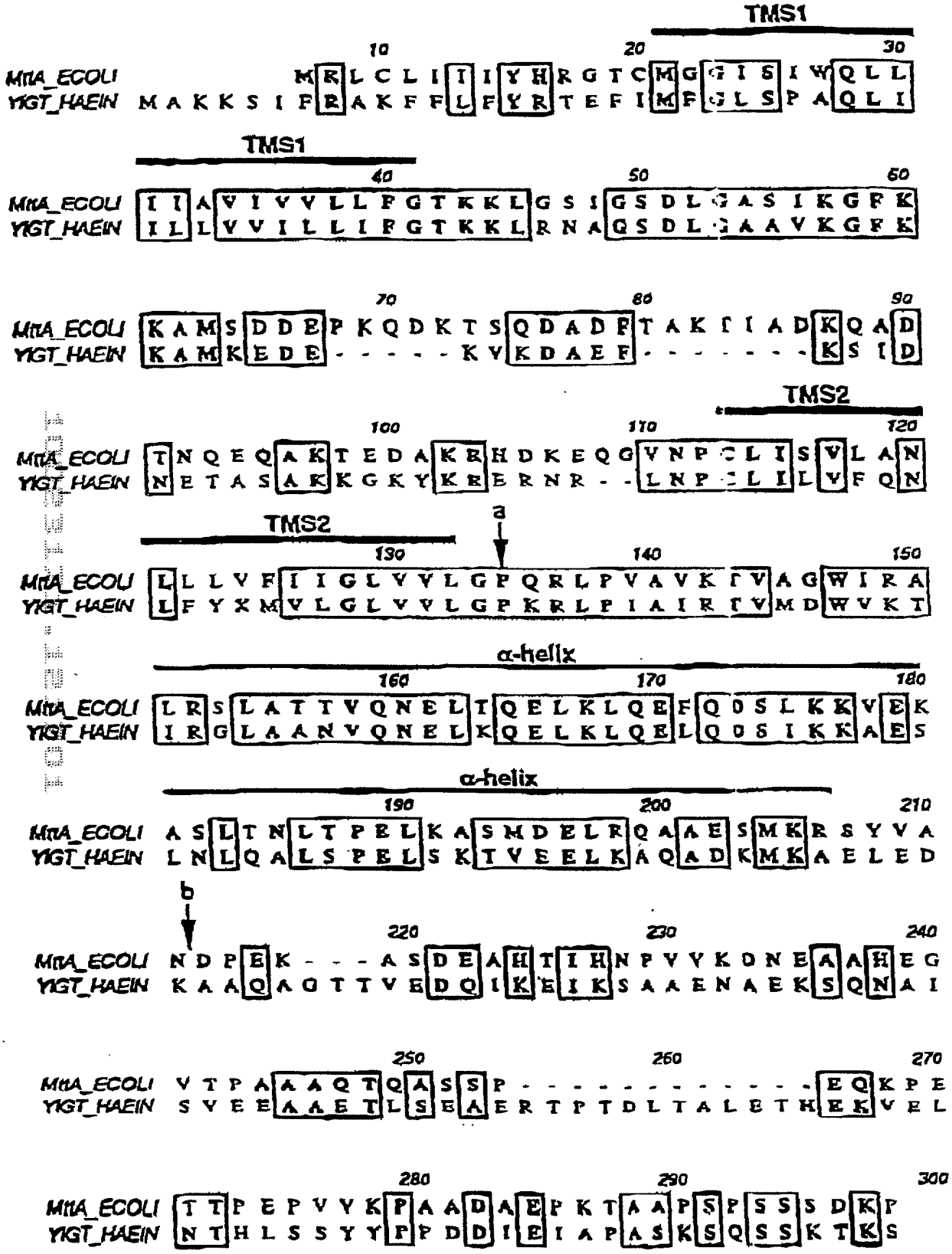
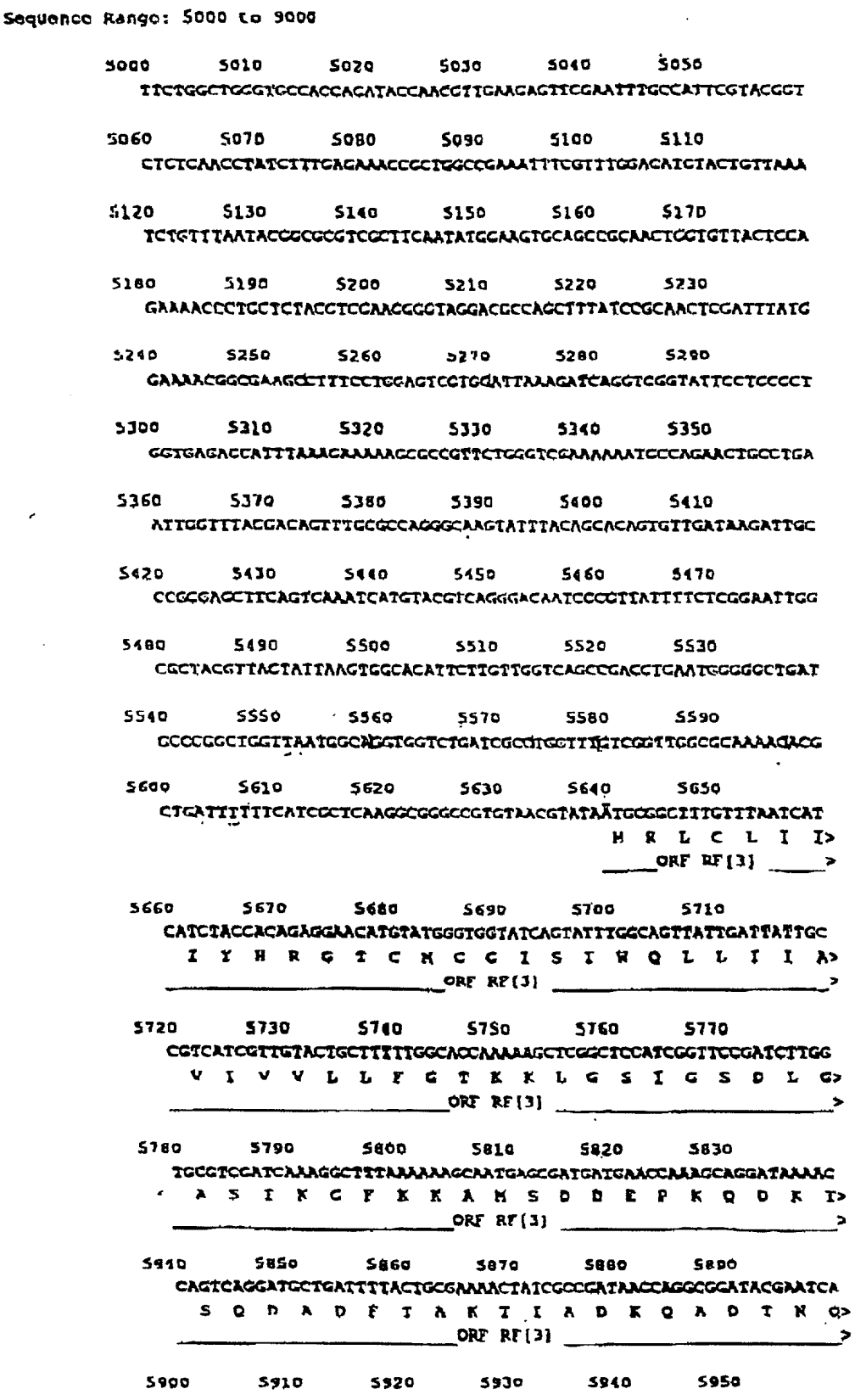


Figure 7(A)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5120 5130 5140 5150 5160 5170
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5180 5190 5200 5210 5220 5230
GAAAACCCTGCTCTACCTCCAACGGGTAGGACGCCAGCTTTATCCGCAACTCGATTTATG
5240 5250 5260 5270 5280 5290
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5300 5310 5320 5330 5340 5350
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5360 5370 5380 5390 5400 5410
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5540 5550 5560 5570 5580 5590
GCCCGGCTGGTTAATGGCAGGTGGTCTGATCGCCTGGTTTCTCGGTTGGCGCAAAACACG
5600 5610 5620 5630 5640 5650
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H R L C L I I>
ORF RF[3] >
5660 5670 5680 5690 5700 5710
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I Y H R G T C M G G I S I W Q L L I I A>
ORF RF[3] >
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V I V V L L F G T K K L G S I G S D L G>
ORF RF[3] >
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A S I K G F K K A M S D D E P K Q D K I>
ORF RF[3] >
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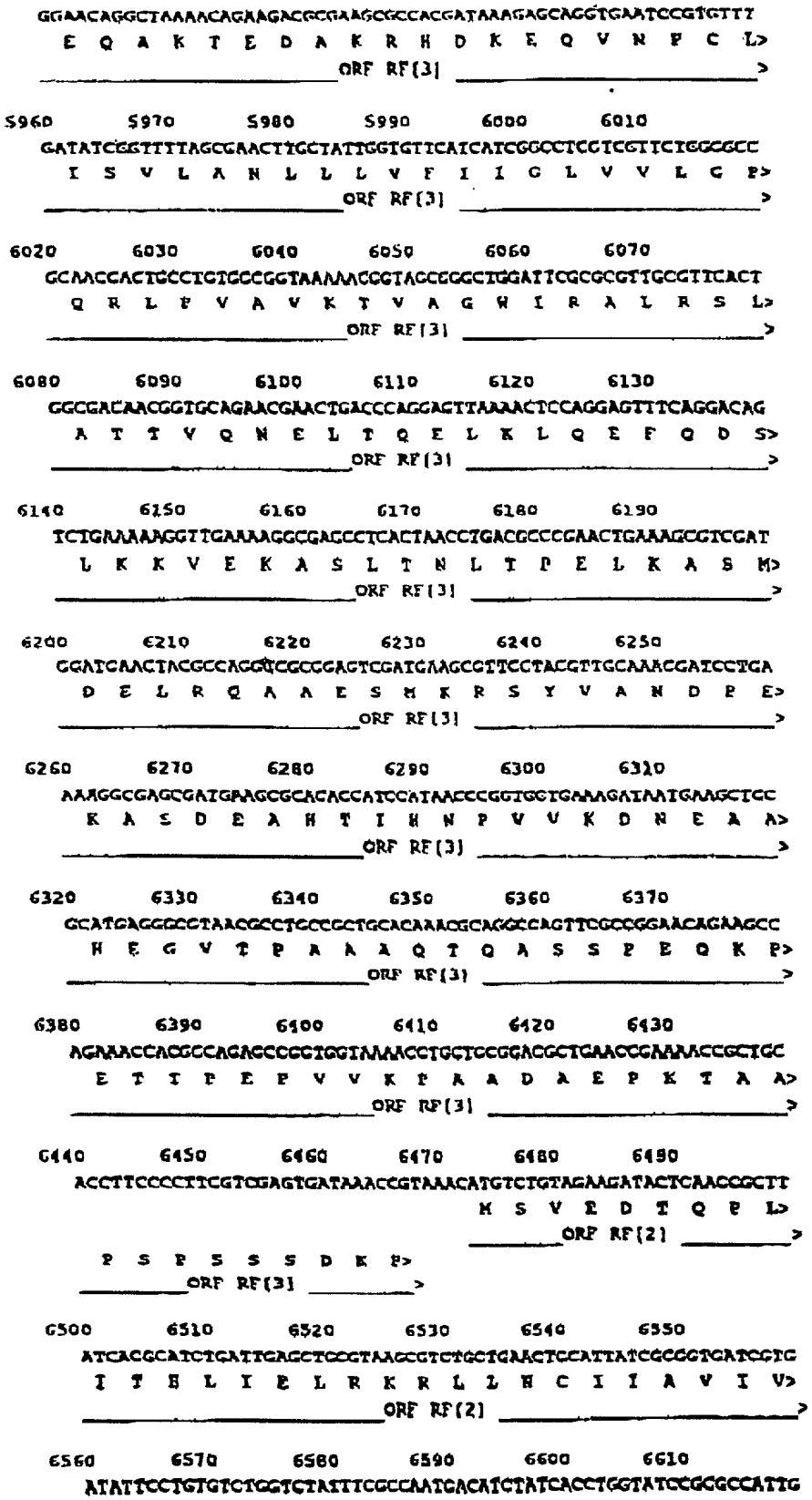
Figure 7(B)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I S V L A N L L L V F I I G L V V L G P>
ORF RF[3]
6020 6030 6040 6050 6060 6070
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Q R L P V A V K T V A G W I R A L R S L>
ORF RF[3]
6080 6090 6100 6110 6120 6130
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A T T V Q N E L T Q E L K L Q E F Q D S>
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L K K V E K A S L T N L T P E L K A S M>
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D E L R Q A A E S M K R S Y V A N D P E>
ORF RF[3]
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K A S D E A H T I H N P V V K D N E A A>
ORF RF[3]
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H E G V T P A A A Q T Q A S S P E Q K P>
ORF RF[3]
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E T T P E P V V K P A A D A E P K T A A>
ORF RF[3]
6440 6450 6460 6470 6480 6490
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M S V E D T Q P L>
ORF RF[2]
P S P S S S D K P>
ORF RF[3]
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I T H L I E L R K R L L N C I I A V I V>
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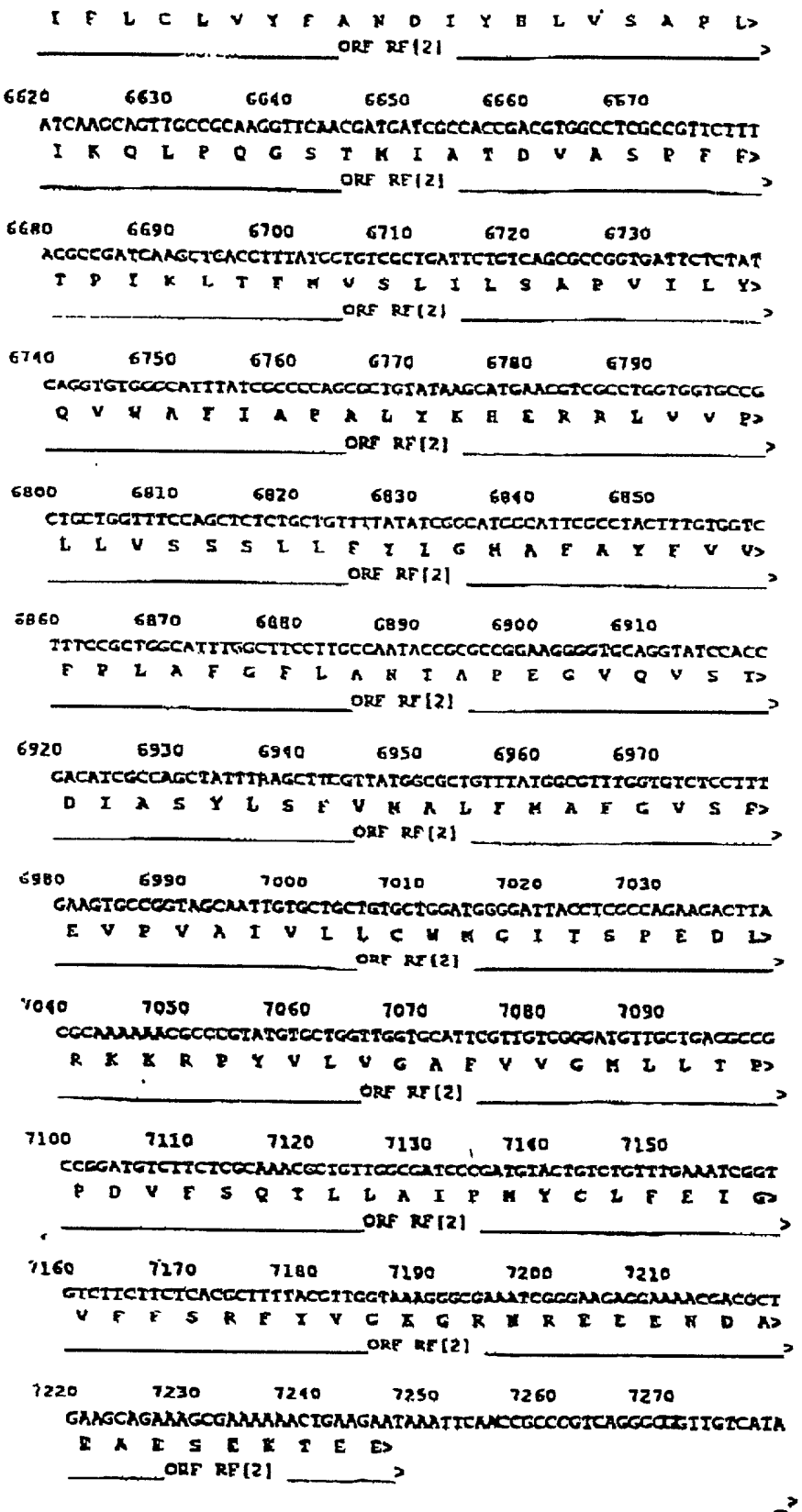
Figure 7(C)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I K Q L P Q G S T M I A T D V A S P F F>
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T P I K L T F M V S L I L S A P V I L Y>
ORF RF[2]
6740 6750 6760 6770 6780 6790
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Q V W A F I A P A L Y K H E R R L V V P>
ORF RF[2]
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L L V S S S L L F Y I G H A F A Y F V V>
ORF RF[2]
6860 6870 6880 6890 6900 6910
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F P L A F G F L A N T A P E G V Q V S T>
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D I A S Y L S F V M A L F M A F G V S F>
ORF RF[2]
6980 6990 7000 7010 7020 7030
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E V P V A I V L L C W M G I T S P E D L>
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P D V F S Q T L L A I P M Y C L F E I G>
ORF RF[2]
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V F F S R F Y V G K G R M R E E E N D A>
ORF RF[2]
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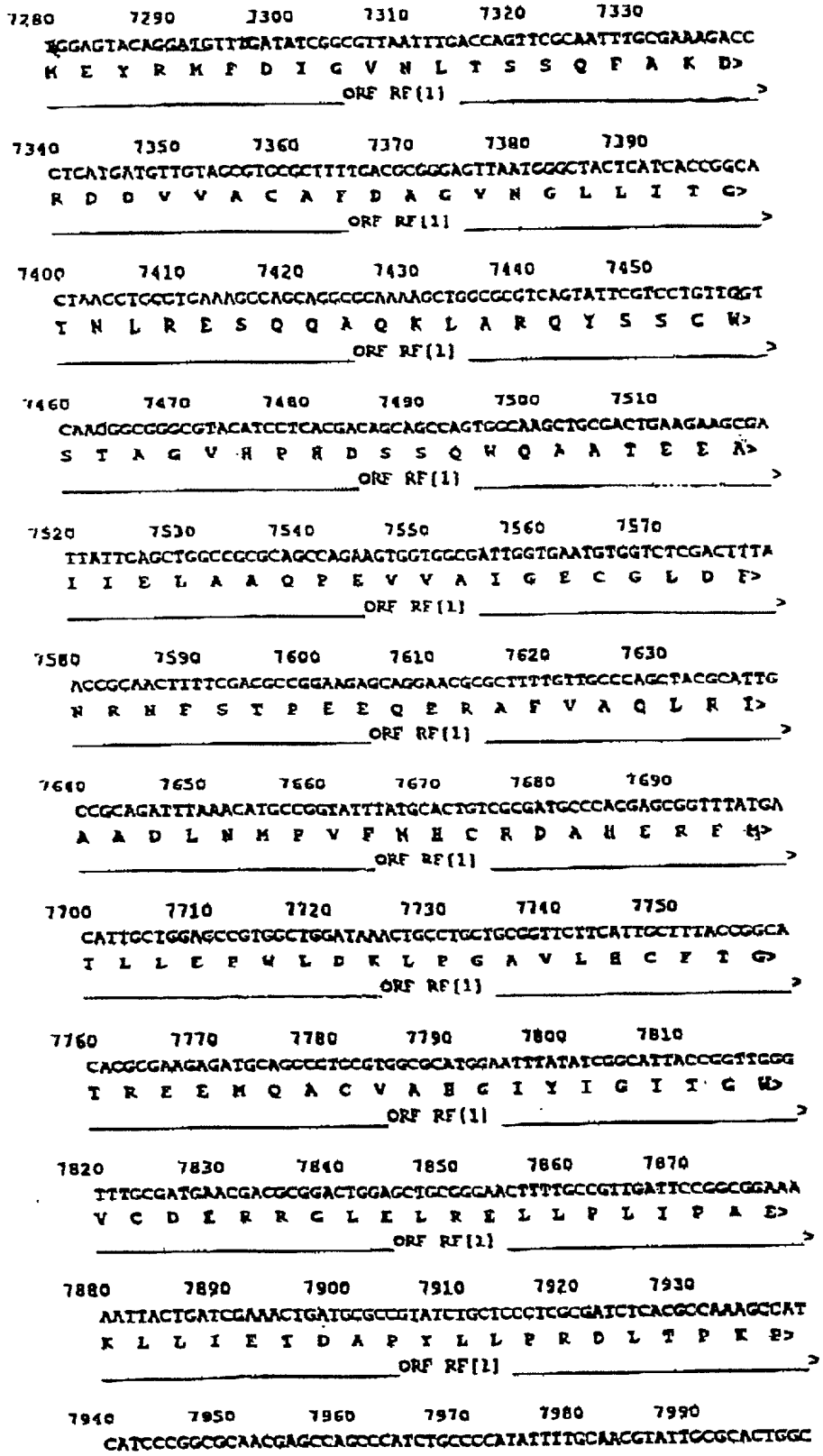
ORF RF[2]

Figure 7(D)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7340 7350 7360 7370 7380 7390
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R D D V V A C A F D A G V N G L L I T G>
ORF RF(1)
7400 7410 7420 7430 7440 7450
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T N L R E S Q Q A Q K L A R Q Y S S C W>
ORF RF(1)
7460 7470 7480 7490 7500 7510
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S T A G V H P R D S S Q W Q A A T E E K>
ORF RF(1)
7520 7530 7540 7550 7560 7570
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I I E L A A Q P E V V A I G E C G L D F>
ORF RF(1)
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N R N F S T P E E Q E R A F V A Q L R I>
ORF RF(1)
7640 7650 7660 7670 7680 7690
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ORF RF(1)
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T L L E P W L D K L P G A V L H C F T G>
ORF RF(1)
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ORF RF(1)
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V C D E R R G L E L R E L L P L I P A E>
ORF RF(1)
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K L L I E T D A P Y L L P R D L T P K E>
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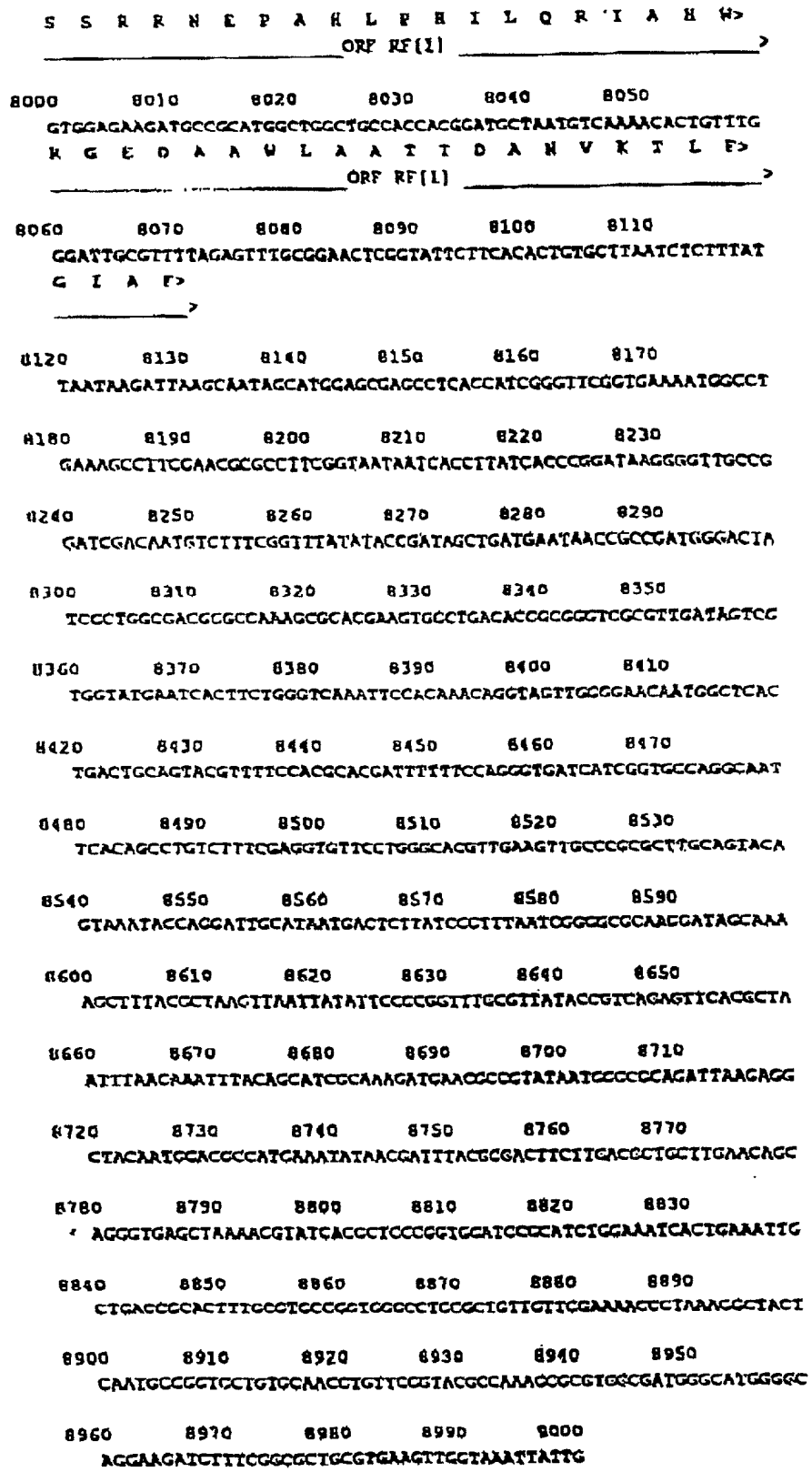
Figure 7(E)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K G E D A A W L A A T T D A N V K T L F>
ORF RF[1]
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G I A F>
8120 8130 8140 8150 8160 8170
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8180 8190 8200 8210 8220 8230
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8360 8370 8380 8390 8400 8410
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8420 8430 8440 8450 8460 8470
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8540 8550 8560 8570 8580 8590
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8780 8790 8800 8810 8820 8830
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8840 8850 8860 8870 8880 8890
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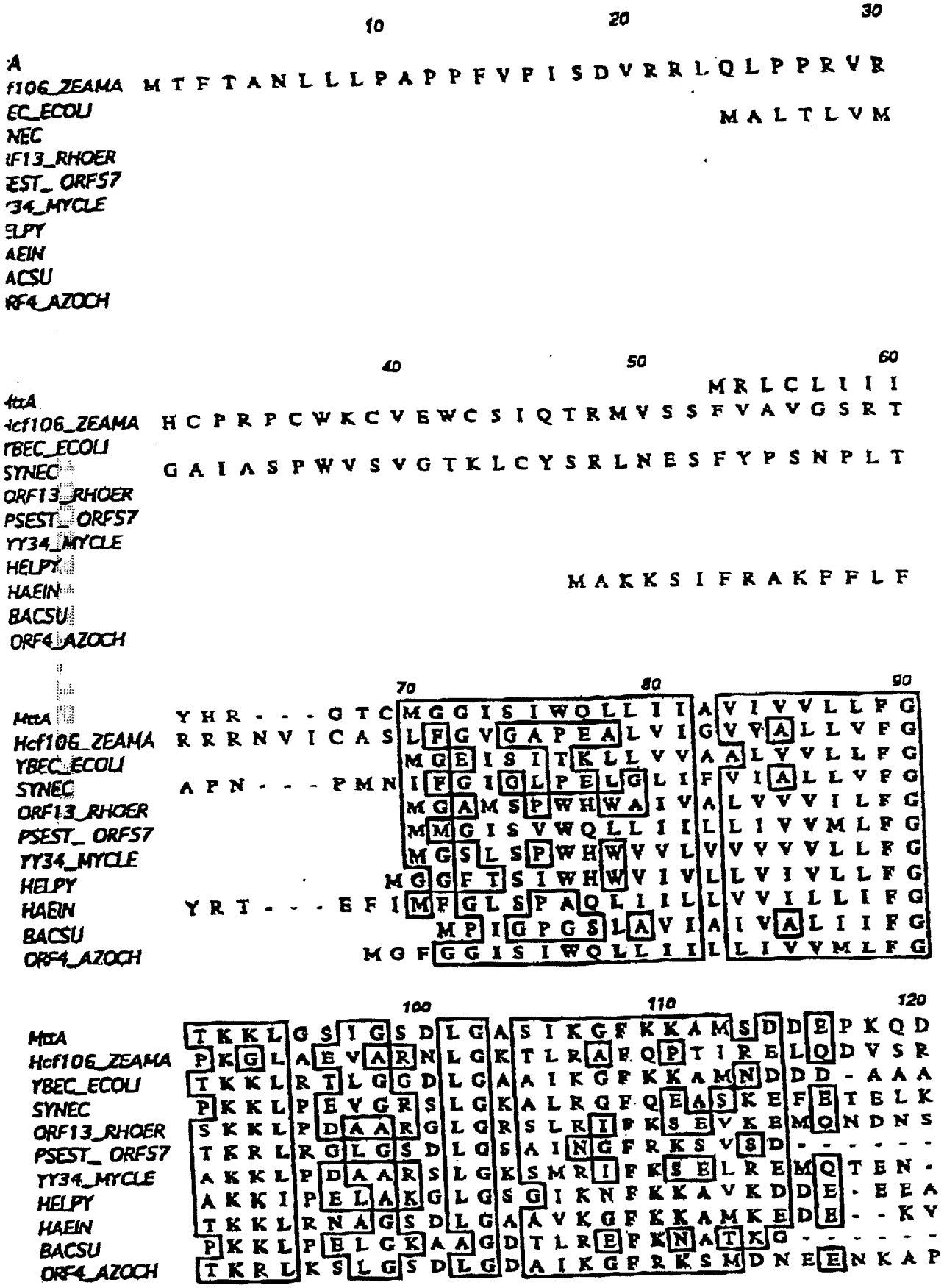
Figure 8(A)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NEC
IF13_RHOER
EST_ ORF57
'34_MYCLE
ELPY
AEIN
ACSU
RF4_AZOCH
40
50
60
MRLCLIII
HtcA
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YBEC_ECOLI
SYNEC G A I A S P W V S V G T K L C Y S R L N E S F Y P S N P L T
ORF13_RHOER
PSEST_ ORF57
YY34_MYCLE
HELPY
HAEIN M A K K S I F R A K P F L F
BACSU
ORF4_AZOCH
70
80
90
HtcA Y H R - - - G T C
Hcf106_ZEAMA R R R N V I C A S
YBEC_ECOLI
SYNEC A P N - - - P M N
ORF13_RHOER
PSEST_ ORF57
YY34_MYCLE
HELPY
HAEIN Y R T - - - E F I
BACSU
ORF4_AZOCH
100
110
120
HtcA
Hcf106_ZEAMA
YBEC_ECOLI
SYNEC
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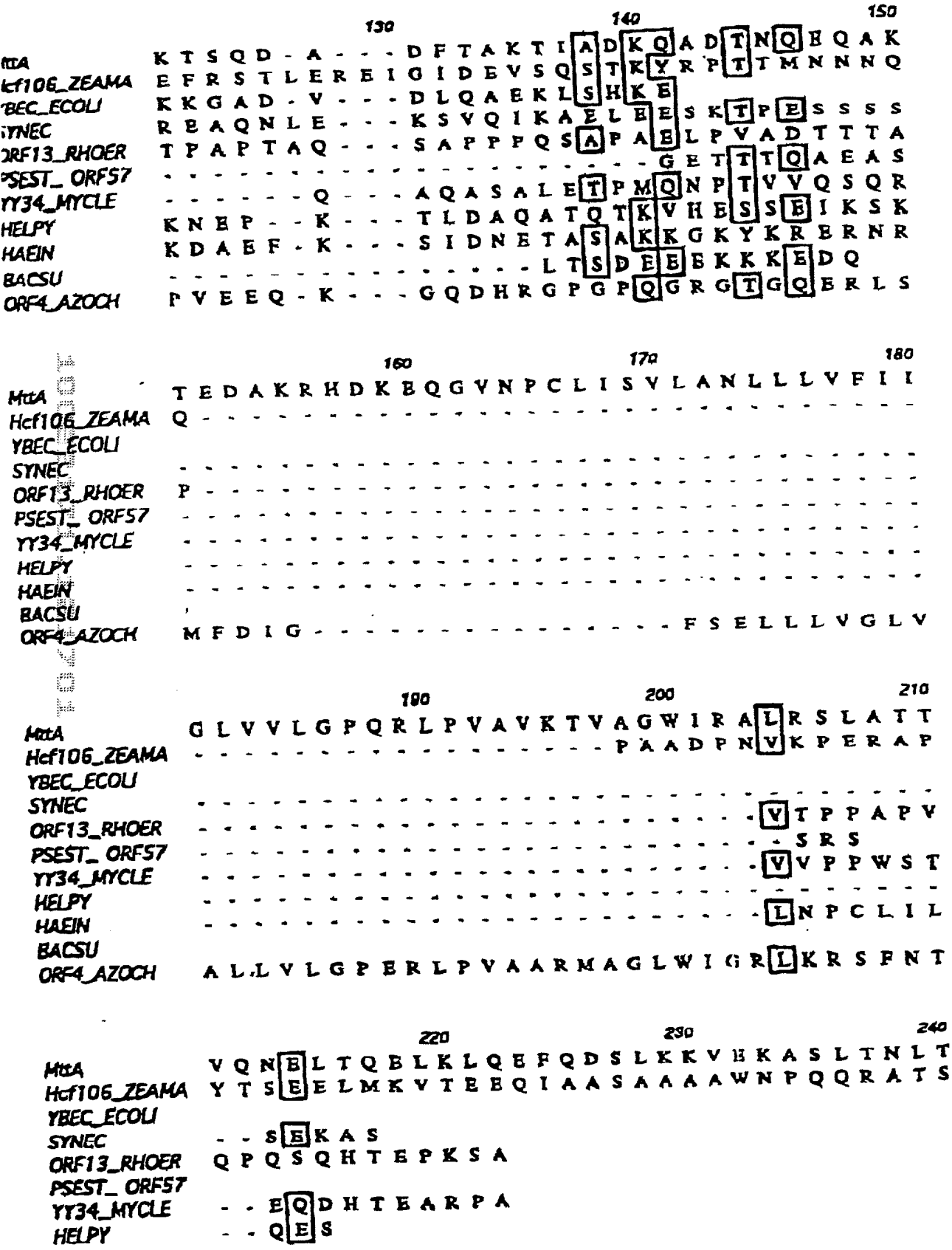
Figure 8(B)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BACSU
ORF4_AZOCH
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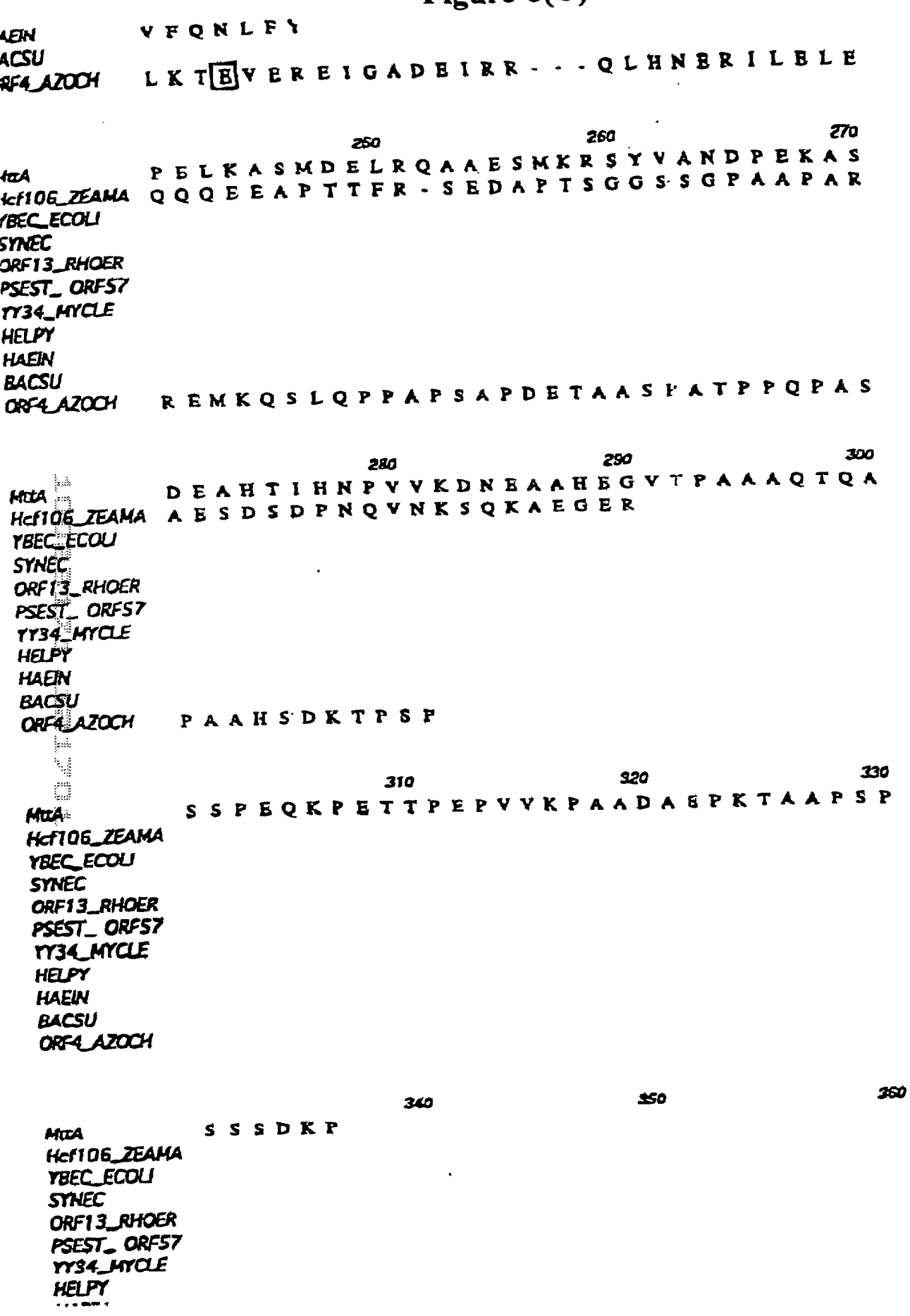
170
180
200
210
220
230
240

Figure 8(C)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YBEC_ECOLI
SYNEC
ORF13_RHOER
PSEST_ ORF57
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280 290 300
MtA D E A H T I H N P V V K D N E A A H E G V T P A A A Q T Q A
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YBEC_ECOLI
SYNEC
ORF13_RHOER
PSEST_ ORF57
YY34_MYCLE
HELPY
HAEIN
BACSU
ORF4_AZOCH P A A H S D K T P S P
310 320 330
MtA S S P E Q K P E T T P E P V V K P A A D A E P K T A A P S P
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YBEC_ECOLI
SYNEC
ORF13_RHOER
PSEST_ ORF57
YY34_MYCLE
HELPY
HAEIN
BACSU
ORF4_AZOCH
340 350 360
MtA S S S D K P
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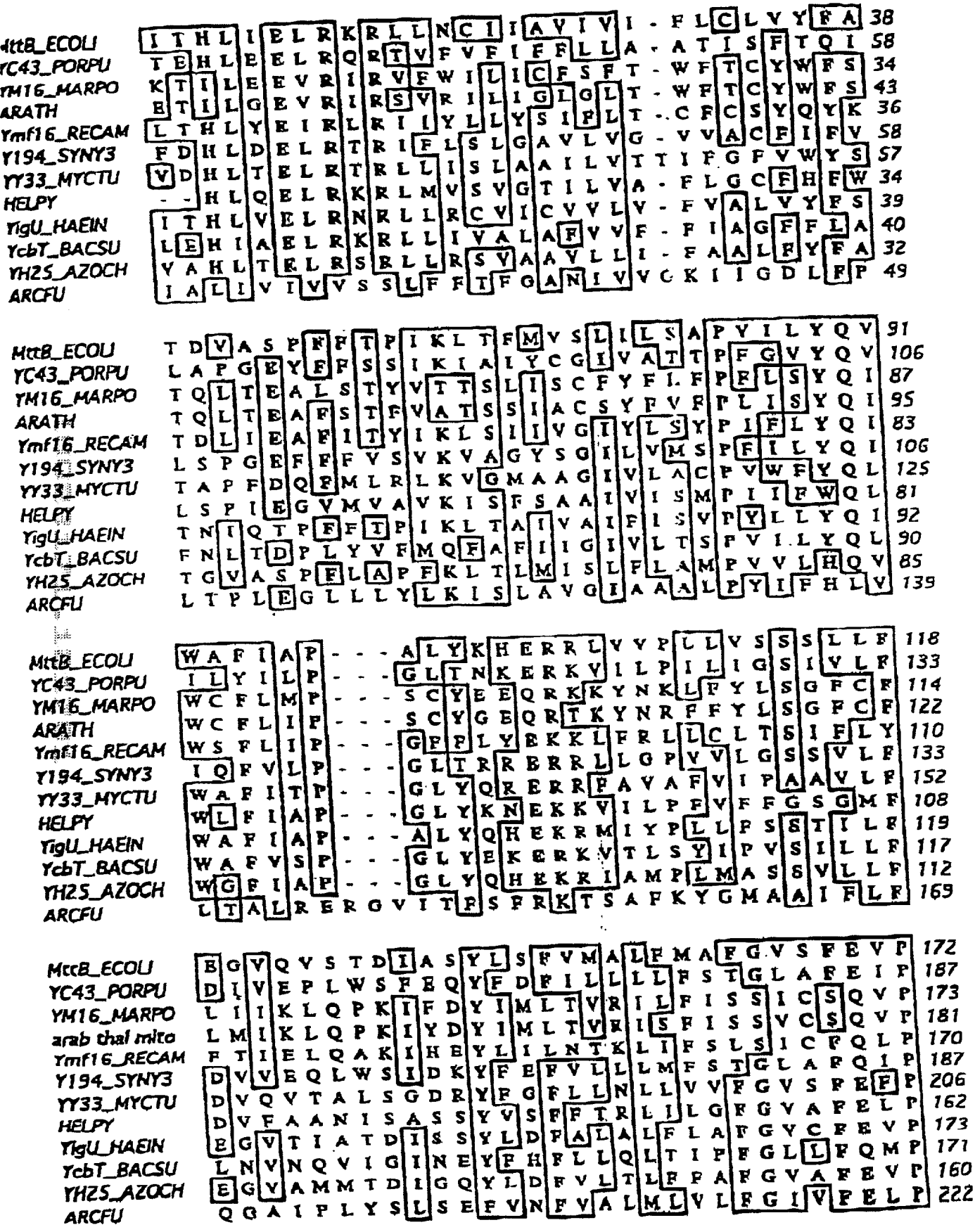
Figure 9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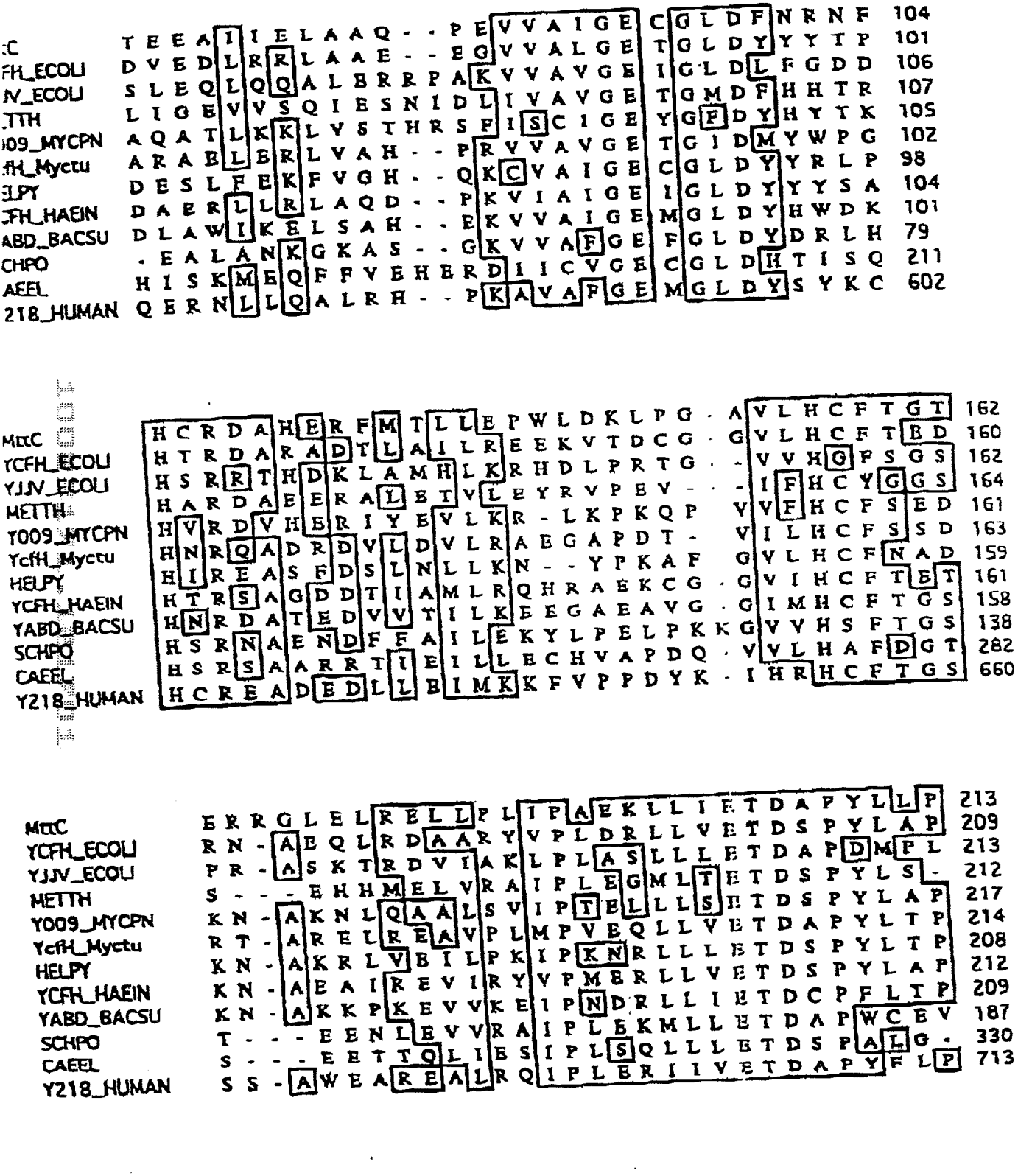
YcbT_BACSU
YH25_AZOCH
ARCFU
arab thal mito

Figure 10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JV_ECOLI
ITH
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fH_Myctu
ELPY
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ABD_BACSU
CHPO
AEEL
218_HUMAN
MttC
YCFH_ECOLI
YJJV_ECOLI
METTH
Y009_MYCPN
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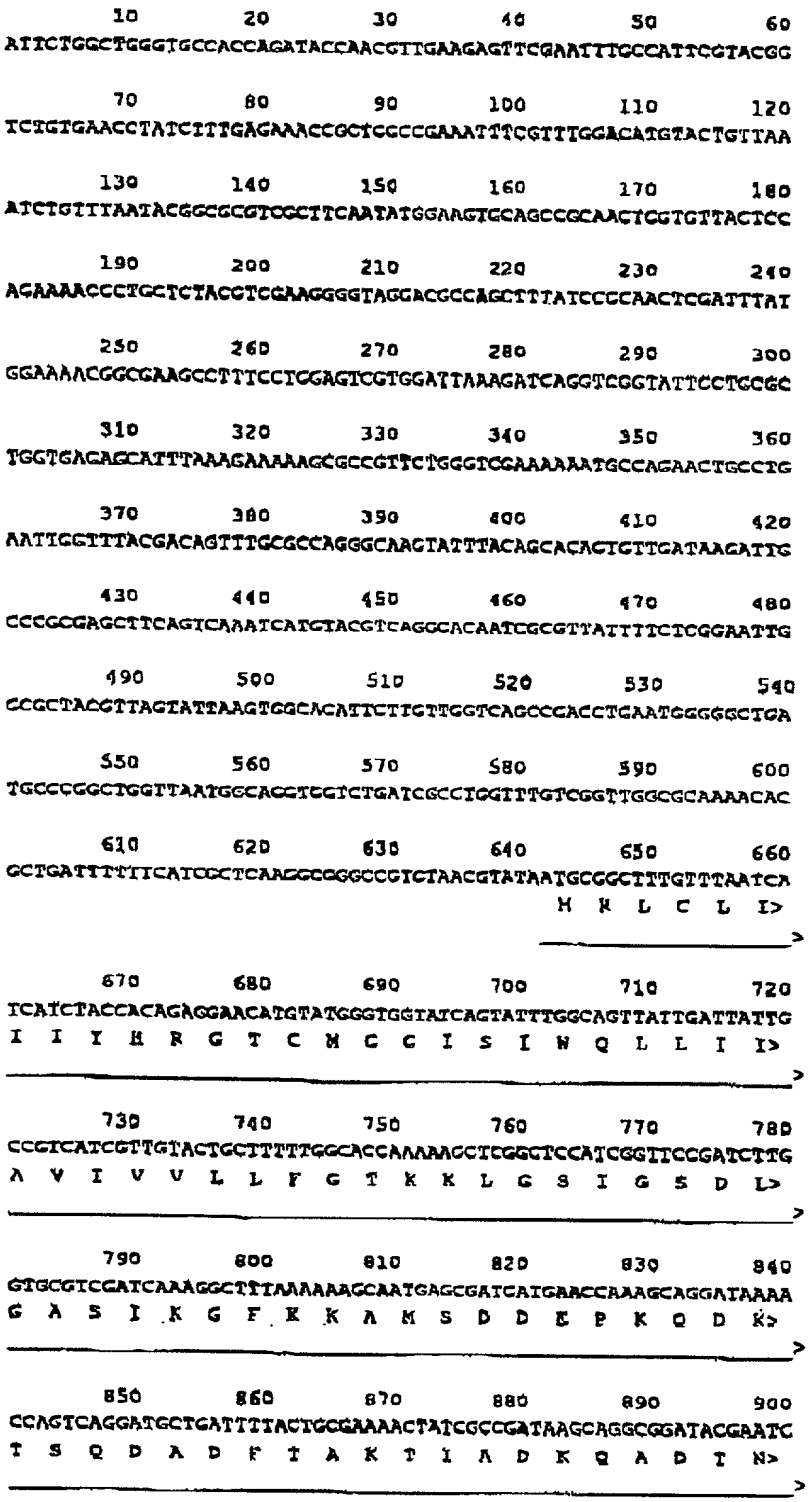
Figure 11(A)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190 200 210 220 230 240
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250 260 270 280 290 300
GGAAAACGGCGAAGCCTTTCCTCGAGTCGTGGATTAAAGATCAGGTCGGTATTCCTGCGC
310 320 330 340 350 360
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370 380 390 400 410 420
AATTGGTTTACGACAGTTTGCGCCAGGGCAAGTATTTACAGCACACTGTTGATAAGATTG
430 440 450 460 470 480
CCCGCGAGCTTCAGTCAAATCATGTACGTCAGGCACAATCGCGTTATTTTCTCGGAATTG
490 500 510 520 530 540
CCGCTACGTTAGTATTAAGTGGCACATTCTTGTTGGTCAGCCGACCTGAATGGGGCTGA
550 560 570 580 590 600
TGCCCGGCTGGTTAATGGCAGGTCGTCTGATCGCCTGGTTTGTCGGTTGGCGCAAAACAC
610 620 630 640 650 660
GCTGATTTTTTCATCGCTCAAGGCGGGCCGTCTAACGTATAATGCGGCTTTGTTTAATCA
M K L C L I>
>
670 680 690 700 710 720
TCATCTACCACAGAGGAACATGTATGGGTGGTATCAGTATTTGGCAGTTATTGATTATTG
I I Y H R G T C M G G I S I W Q L L I I>
>
730 740 750 760 770 780
CCGTCATCGTTGTACTGCTTTTTGGCACCAAAAAGCTCGGCTCCATCGGTTCCGATCTTG
A V I V V L L F G T K K L G S I G S D L>
>
790 800 810 820 830 840
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G A S I K G F K K A M S D D E P K Q D K>
>
850 860 870 880 890 900
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T S Q D A D F T A K T I A D K Q A D T N>
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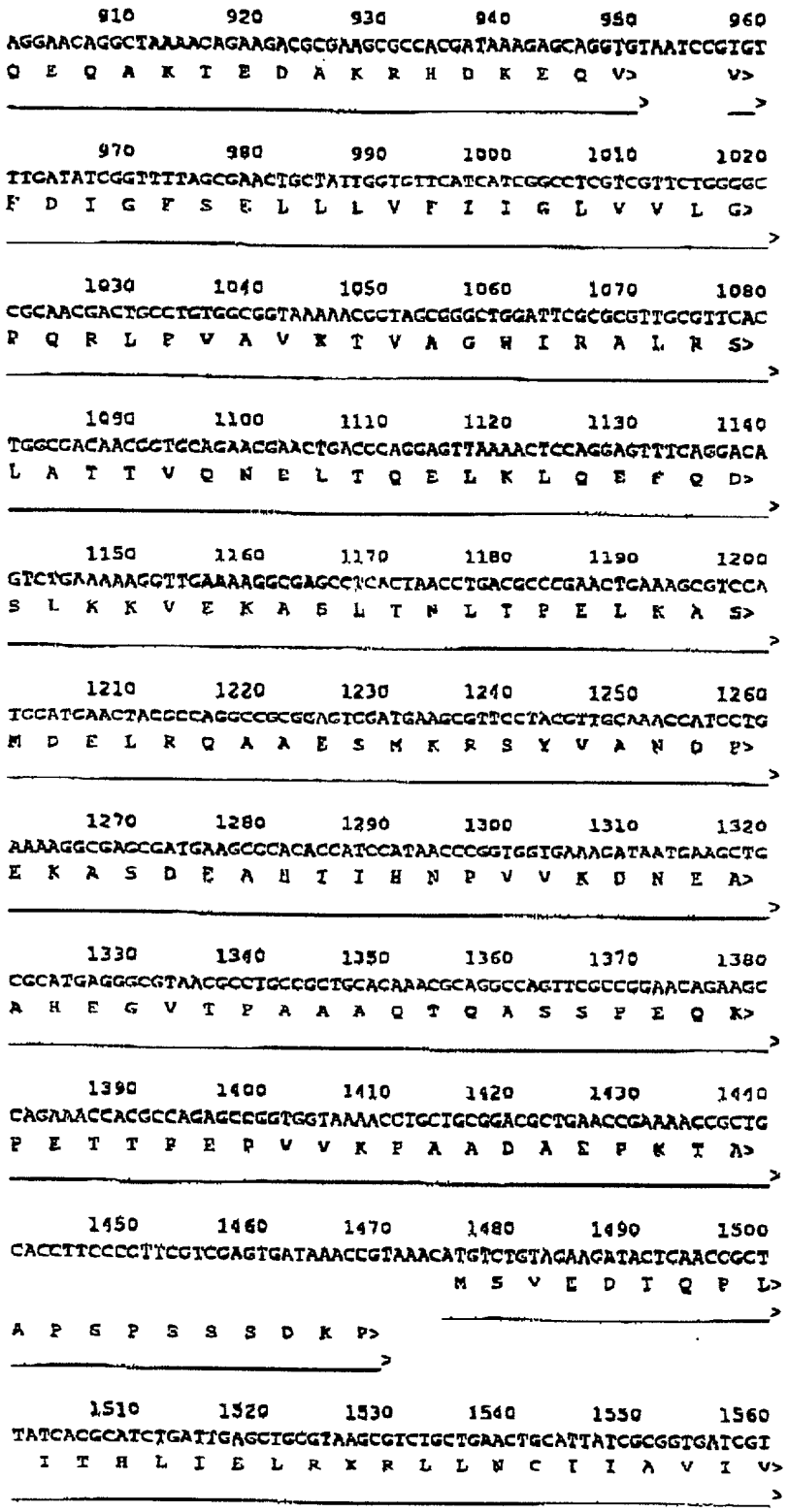
Figure 11(B)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Q E Q A K T E D A K R H D K E Q V> V>
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F D I G F S E L L L V F I I G L V V L G>
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P Q R L P V A V K T V A G H I R A L R S>
1090 1100 1110 1120 1130 1140
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L A T T V Q N E L T Q E L K L Q E F Q D>
1150 1160 1170 1180 1190 1200
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S L K K V E K A S L T N L T P E L K A S>
1210 1220 1230 1240 1250 1260
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M D E L R Q A A E S M K R S Y V A N Q P>
1270 1280 1290 1300 1310 1320
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E K A S D E A H T I H N P V V K D N E A>
1330 1340 1350 1360 1370 1380
CGCATGAGGGCGTAACGCCTGCCGCTGCACAAACGCAGGCCAGTTCGCCCGAACAGAAGC
A H E G V T P A A A Q T Q A S S P E Q K>
1390 1400 1410 1420 1430 1440
CAGAAACCACGCCAGAGCCGGTGGTAAAACCTGCTGCGGACGCTGAACCGAAAACCGCTG
P E T T P E P V V K P A A D A E P K T A>
1450 1460 1470 1480 1490 1500
CACCTTCCCCTTCGTCGAGTGATAAACCGTAAACATGTCTGTAGAAGATACTCAACCGCT
M S V E D T Q P L>
A P S P S S S D K P>
1510 1520 1530 1540 1550 1560
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I T H L I E L R K R L L N C I I A V I V>
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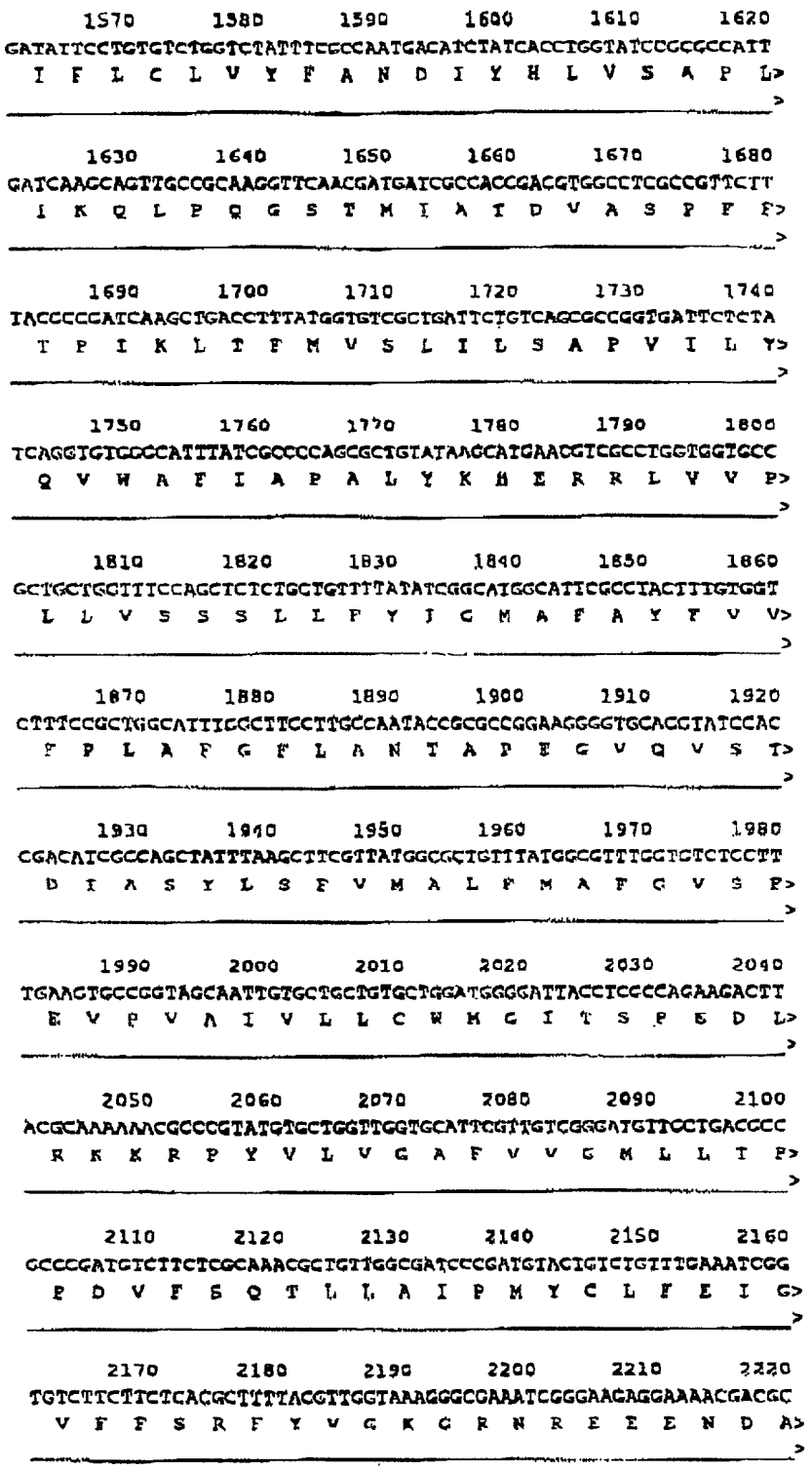
Figure 11(C)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1630 1640 1650 1660 1670 1680
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I K Q L P Q G S T M I A T D V A S P F F>
1690 1700 1710 1720 1730 1740
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T P I K L T F M V S L I L S A P V I L Y>
1750 1760 1770 1780 1790 1800
TCAGGTGTGGCCATTTATCGCCCCAGCGCTGTATAAGCATGAACGTCGCCTGGTGGTGCC
Q V W A F I A P A L Y K H E R R L V V P>
1810 1820 1830 1840 1850 1860
GCTGCTGGTTTCCAGCTCTCTGCTGTTTTATATCGGCATGGCATTCGCCTACTTTGTGGT
L L V S S S L L F Y I G M A F A Y F V V>
1870 1880 1890 1900 1910 1920
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F P L A F G F L A N T A P E G V Q V S T>
1930 1940 1950 1960 1970 1980
CGACATCGCCAGCTATTTAAGCTTCGTTATGGCGCTGTTTATGGCGTTTGGTGTCTCCTT
D I A S Y L S F V M A L F M A F G V S F>
1990 2000 2010 2020 2030 2040
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E V P V A I V L L C W M G I T S P E D L>
2050 2060 2070 2080 2090 2100
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R K K R P Y V L V G A F V V G M L L T P>
2110 2120 2130 2140 2150 2160
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P D V F S Q T L L A I P M Y C L F E I G>
2170 2180 2190 2200 2210 2220
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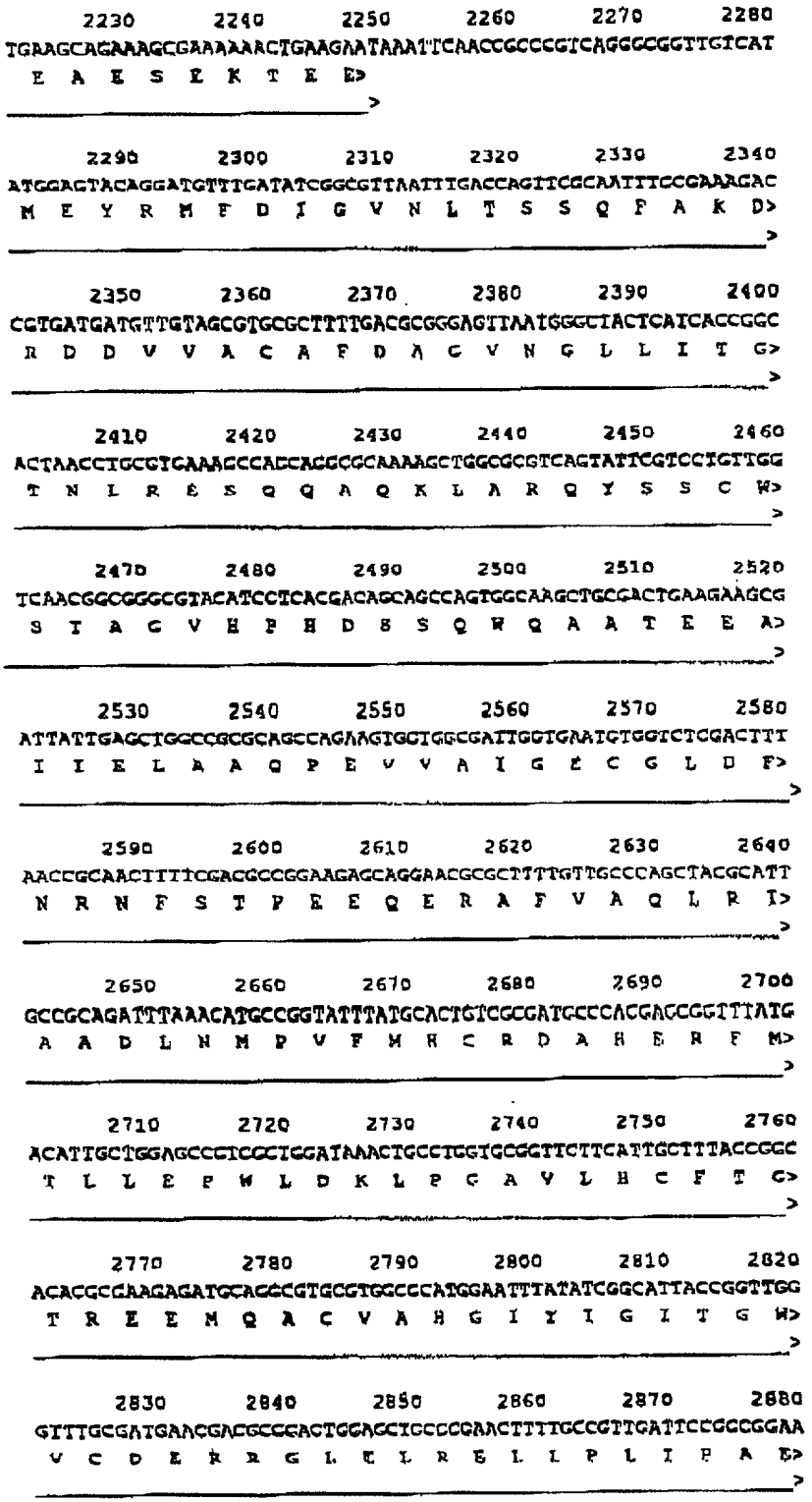
V F F S R F Y V G K G R N R E E E N D A>
2230

Figure 11(D)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2590 2600 2610 2620 2630 2640
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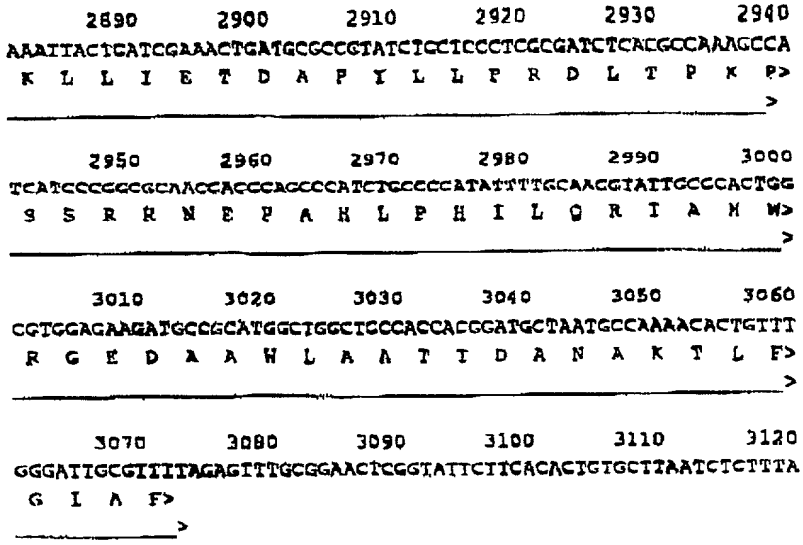
Figure 11(E)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S S R R N E P A K L P H I L Q R I A M W>
3010 3020 3030 3040 3050 3060
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R G E D A A W L A A T I D A N A K T L F>
3070 3080 3090 3100 3110 3120
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G I A F>